

SUSTAINABILITY FOR LOGISTICS ENTERPRISES IN SINGAPORE

SUSTAINABILITY PLAYBOOK

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FOREWORD

Singapore's logistics companies connect economies, enable industries, and improve people's lives around the world, earning Singapore its title of a global logistics hub. We have a responsibility to operate in a way that preserves not only the vitality of our businesses but also the health of the planet we all share. With the rising importance of sustainability, customers and supply chains are increasingly mandating contractors to provide some form of sustainability reporting. In certain cases, sustainability criteria have been incorporated into the tender specifications too.

This playbook is a testament to the Singapore Logistics Association (SLA)'s commitment, outlined in Vision 2027, to guide and empower our members to start your sustainability journeys. Developed in partnership with Enterprise Singapore, the insights, toolkits, and best practices shared are tailored to the unique challenges and opportunities faced by the logistics sector in Singapore.

I urge every logistics company to start their sustainability transformation quickly. Beyond building competitive advantage, green logistics practices also help manage rising business costs by cutting wastages, improving productivity, and reducing carbon footprint. By embarking on this journey together, we can strengthen the fabric of our industry and contribute to the broader goal of building a sustainable future for generations to come.

My heartfelt appreciation goes to Enterprise Singapore and Eden Strategy Institute for their invaluable partnership in bringing this playbook to fruition. I am confident that with this playbook, our logistics community will be better equipped to overcome the challenges of today, as well as lay the foundation for a resilient and sustainable logistics of tomorrow.

Wishing you all a successful and sustainable journey ahead.



DAVE NG | Chairman | Singapore Logistics Association

PREFACE

The logistics industry enables flow of goods for industries representing more than half of Singapore's GDP – ranging from essential domestic sectors such as construction, to externally oriented sectors such as manufacturing and trade.

Logistics is critical to Singapore's status as a globally competitive and connected trade and connectivity hub. To maintain this status, we will need to stay ahead of global trends, including the need to ensure green supply chains.

Businesses across sectors have begun making Net Zero declarations. Given that logistics services contribute a significant share of global carbon emissions and that MNCs are requiring their logistics service providers to go green, it is important for logistics companies to bring forward decarbonisation plans and help develop green supply chains.

The logistics sustainability playbook, developed as part of the Enterprise Sustainability Programme, describes key sustainability trends in the sector and will help you develop and implement strategies to make your business more sustainable. These strategies enable you to capture opportunities arising from the green economy and future-proof your business against green transition risks.

Enterprise Singapore and Singapore Logistics Association are committed to supporting companies in the sector to develop sustainability reporting and decarbonisation capabilities.

I would like to thank our knowledge contributors who have taken time to share their valuable insights to enable further growth of the industry.



**LEE PAK SING | Assistant Chief Executive Officer, Trade & Connectivity Group |
Enterprise Singapore**

INTRODUCTION

Sustainability is a rapidly evolving field, and it is natural to feel overwhelmed by regulatory frameworks and standards, new trends, and technologies.

This playbook, developed based on findings from a broader Singapore Logistics Industry Sustainability Study, seeks to:

- (i) Establish baseline measures for the sector's sustainability performance
- (ii) Set a common sustainability vision
- (iii) Develop a roadmap to catalyse sustainability, especially among local logistics enterprises in Singapore

Through this playbook, you can expect to:

- Learn how to improve your sustainability performance and track progress
- Identify new opportunities that sustainability can bring and evaluate sustainability approaches to invest in
- Access consolidated resources relevant for you, such as training courses, tools, and frameworks

The playbook builds on findings from focus group discussions and in-depth interviews conducted from September-October 2023 with over 30 industry participants – including solution providers and logistics companies.

Note: This is a preliminary draft, and an updated edition will be published after our knowledge partner Eden Strategy Institute completes the industry consultation. Logistics companies are encouraged to write in to research@edenstrategyinstitute.com to participate in this consultation, or to offer their feedback on this playbook.

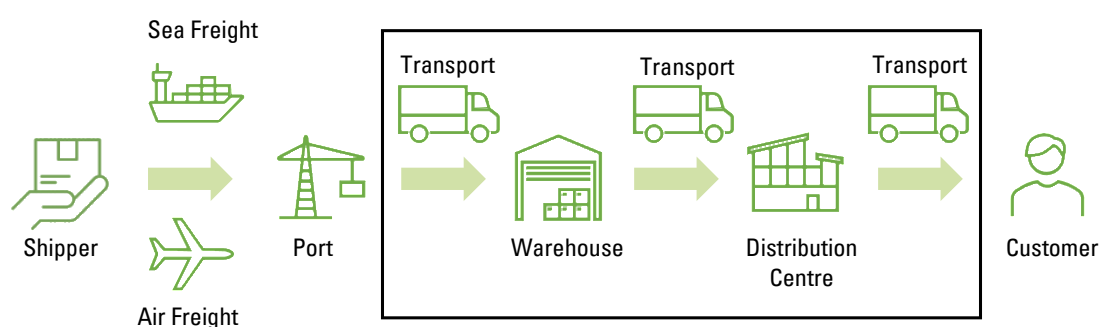
Singapore's logistics sector

The logistics sector is an integral part of Singapore's economy, enabling more than half of Singapore's GDP by supporting key sectors such as manufacturing and trade¹ and placing Singapore first in the World Bank Logistics Performance Index².

This playbook will focus on land-based logistics operations outside of the ports and excludes air and sea freight.

Within this, Singapore's logistics companies perform a variety of activities along the logistics value chain (shown in Figure 2), including transporting goods between different logistics nodes such as ports and distribution centres, warehousing and storage of goods, as well as cargo handling at container depots.

Figure 2: Logistics activities at each part of the value chain



Among commercial vehicles in Singapore's logistics sector, prime movers are responsible for generating the greatest emissions³.

5,454

Prime movers in
Singapore

720km

Operating distance in a
day throughout the year

1.6km/litre

Fuel efficiency for
diesel

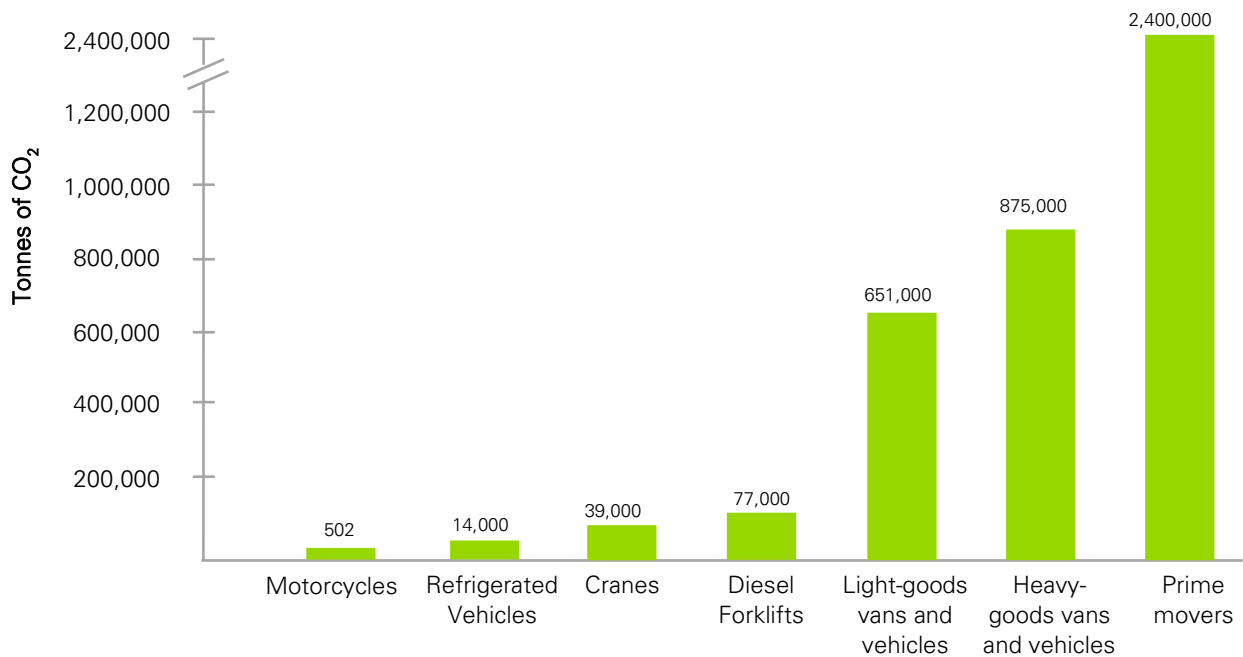
This is followed by heavy-goods vans and vehicles, and light-goods vans and vehicles (shown in Figure 3). Within other logistics activities, diesel forklifts emit twice as much as cranes due to the large number of forklifts in Singapore (5,415 forklifts compared to 446 cranes).

¹ Estimated based on nominal GDP contribution of logistics-supported sectors in 2021, including F&B, utilities, retail trade, construction, transport & storage, wholesale trade, and manufacturing (Department of Statistics Singapore, 2021)

² 'Logistics Performance Index 2023 Update', The World Bank, 2023

³ See assumptions of sector estimates in Annex

Figure 3: Logistics sector Scope 1 emission estimates breakdown



Source: Eden Strategy Institute estimates



WHY SUSTAINABILITY MATTERS

Sustainability is important to reduce business risks—with increasing pressure from customers and regulators—and catalyse new opportunities for growth from reducing operating costs to innovating sustainable services.

WHY SUSTAINABILITY MATTERS

Across all sectors, businesses are responding to the urgency of addressing climate change by making Net Zero declarations and setting emissions reduction goals.

There is an increasing focus on sustainable supply chains as 11% of global carbon emissions are from logistics services such as freight, ports, and warehousing. In addition, the International Sustainability Standards Board (ISSB) has released its requirements for companies to disclose indirect emissions that are generated by customers and suppliers in their value chain, which includes logistics providers.

Companies seeking to reduce their indirect emissions, especially those with their own climate targets, like FedEx and Amazon, and those who are signatories to the Science-based Targets Initiative (SBTi) such as Bolloré, DB Schenker, and DHL, will be placing increasing pressure

on the logistics sector to decarbonise.

The social aspect of sustainability has also gained prominence. For example, suboptimal working conditions can tarnish a company's brand reputation. In 2022, contract drivers for XPO Logistics filed a formal complaint to the American National Labour Board, claiming that the firm violated labour legislations. The contracted drivers claimed that they were operating as employees, but without benefits like healthcare, paid sick leave, and overtime pay.⁴

This global sustainability trend is fundamentally changing the way companies do business. Logistics companies that continue to disregard the environmental and social consequences of their business operations risk being forced out of the market.

⁴ ['XPO and Teamsters fire opening shots in new battle over drayage driver status', The Loadstar, 2022](#)

Sustainability has become a strategic business imperative for long-term resilience and growth.

Many leading logistics companies in Singapore have embraced sustainability as a new way of doing business⁵ to mitigate risks while creating new business opportunities.

For example, Singapore Post (SingPost), a postal and logistics company headquartered in Singapore, has obtained global recognition through the World Post and Parcel Awards 2023 for its commitment to sustainability⁶.

Even among SMEs surveyed in Singapore, 84% agree that Environmental, Social, and Governance (ESG) is now a top business priority⁷.

Differentiation with sustainability

In 2023, Bolloré Logistics Singapore turned sustainability into a key value proposition to its clients in the beauty industry by focusing on end-of-life product material recycling.

As a third-party logistics (3PL) partner, it dismantles and sorts expired products to recycle as many materials as possible, from product containers to external packaging like wooden pallets and stretch film.

They extended this service to expired finished goods, such as skincare and makeup products, that would otherwise be incinerated.

Bolloré Logistics is now able to act as an integrator and single point of contact for its clients for such circular logistics solutions.

⁵ [‘Sustainability Impact Awards celebrate new way of doing business’, The BusinessTimes, 2023](#)

⁶ [‘SingPost Wins Prestigious World Post and Parcel Awards for Best Innovation Strategy and Commitment to Sustainability’, Singapore Post, 2023](#)

⁷ [‘Catalysts of Sustainability’, Bloomberg, 2022](#)

Benefits of being sustainable



Reduce business risks and costs relating to sustainability

Reduce transitional risks



Evolving customer expectations:

In a survey⁸ with multinational corporations (MNCs), some with supply chains in Singapore, 78% stated that they would remove suppliers that endanger their carbon transition plans by 2025.

Logistics companies consulted foresee a greater emphasis on sustainability in upcoming tenders by their customers. For suppliers, a lack of sustainability capabilities could translate to missed revenue opportunities.



Sustainability reporting requirements:

Given the growing expectations of investors for companies to address ESG risks, there have been increasing regulations for companies to conduct sustainability reporting.

- The Singapore Exchange (SGX) mandates all listed companies to submit sustainability reports on a 'comply or explain' basis, and mandates climate reporting gradually across all sectors in a phased approach.
- Upon finalisation of the Sustainability Reporting Advisory Committee recommendations, large non-listed companies might also be subject to climate reporting, which could be cascaded down to smaller non-listed companies in 2030 and beyond.

Find out more about the sustainability reporting regulations and other policies [here](#).

⁸ ['Carbon Dated', Standard Chartered Bank, 2021](#)

What are the current pressures for logistics players to be sustainable?

“ In the coming two to three years, sustainability will be a decision-making criterion that determines whether we switch out our suppliers.”

Bolloré Logistics

“MNCs, especially European-based, would ask for ESG policies and are pressurising local companies. They want you to be part of their policies as their vendor.”

CK Shipping

“ MNCs are asking for sustainability policies. If that is absent, [you] don't have to show up for the next meeting.”

SFS Global Logistics

“More customers have asked about our sustainability strategy and targets. There are also increased interests on carbon footprint of products and services that they procure and the efforts we take to lower this footprint.”

SingPost

Mitigate physical risks

Climate change will result in greater intensity and frequency of extreme weather events globally. In Singapore, it is projected that mean temperatures will rise 0.6°C to 5°C by the end of the century, and extreme daily rainfall will increase across all seasons, increasing the risk of flash floods⁹.

These changes could lead to disruptions in business operations, resulting in higher operating costs.

Disruptions in operations:



Flash floods may lead to delivery vehicles being delayed or re-routed – affecting customer fulfilment and service levels. It may also damage delivery vehicles or customer products.

Global supply chain disruptions due to extreme weather events may also affect the delivery timeframes of local logistics companies.



Higher operating costs:

Higher temperatures require increased air-conditioning to cool warehouses, especially for temperature-sensitive goods such as electronics or perishables.

With the rise in electricity prices, higher energy consumption due to additional air-conditioning use would increase costs.

⁹ ['Latest Climate Projections For Singapore Show Intensifying Urban Heat And More Wet & Dry Extremes'. National Environment Agency. 2024.](#)

Business opportunities arising from sustainability

Reap operational cost savings

There is natural synergy between operational excellence and sustainability. Less use of resources translates into increased efficiencies and lower operational costs. You can achieve cost savings via:



Packaging efficiency:

Removing unnecessary shrink wrap usage or using thinner shrink wrap can save costs while reducing environmental footprint. For example, by optimising the amount of stretch films used, Bolloré Logistics saved up to 30% of plastic and reduced material costs.



Energy efficiency:

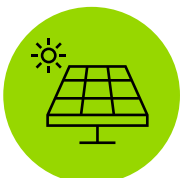
This can be achieved through energy saving habits (for example, shutting down equipment during breaks) and through adoption of technologies (for example, switching to LED lighting, experimenting with different insulating materials to reduce cooling requirements etc.). SFS Global Logistics reports 30% electricity cost savings from insulating roof with phase change material.



Optimisation that results in fuel efficiency:

Route optimisation software, telematics, and demand planning software are tools that can help to optimise vehicle fleets – reducing fuel consumption.

According to Stemly, a route optimisation software provider, there will be reduced fuel consumption and emissions due to the shorter distance travelled, and companies might experience up to a 20-30% reduction in fuel bills.



Renewable energy:

Investing in renewable energy, such as solar panels, can be a way to manage rising electricity costs. Leasing solar panels are less capital-intensive and allows companies to enjoy the benefits of reduced electricity bills, as well as profit when excess solar is sold back to the grid.

By leasing and installing solar panels, YCH Group obtained up to 50% electricity cost savings.

Revenue upside

The following are opportunities that you can tap from embracing sustainability.



Market differentiation:

Sustainability can be a way for you to differentiate your company from competitors. For instance, 3PLs could offer sustainable warehousing services, and last mile delivery providers could offer sustainable transport services. These green services help to gain new customer accounts or earn fee premiums. In addition, adopting internationally recognised standards and certifications can build company's qualitative narrative with sustainability credentials to prevent greenwashing and meet stakeholders' and customers' demands.



Capture customer demand:

As customers become more environmentally conscious, sustainability not only helps to retain customers but also encourages brand loyalty and repeat customers. With major retailers like New Look already reducing Scope 3 emissions by 22%, many companies are likely to follow suit and push the pressure to reduce emissions down to logistics companies. Adopting internationally recognised standards and certifications also help to build trust and assurance in your company's products and services.



New revenue streams:

Companies can leverage sustainability to expand their offerings.

For example, SFS Global Logistics is introducing carbon tracking tools for their customers on top of regular transportation service, which helps to gain extra revenue from this additional service.

CWT Logistics' integrated warehouse and depot facilities also enable them to cross-sell logistics services while saving carbon emissions as goods do not need to be transported great distances from the depot to the warehouse to be stored.



Improved market access:

Stricter regulations in more developed markets like the European Union (EU), the US, and Canada would require companies to meet certain sustainability standards before obtaining market entry.

For example, by 2035, all new vans operating in the European market need to be zero emissions.

CASE STUDY

SFS GLOBAL LOGISTICS: SUSTAINABILITY AS A COMPETITIVE DIFFERENTIATOR

Mr Roger Chew, founder and group CEO of SFS Global Logistics, has always focused on differentiating his company from its competitors. Firstly, through technology, and now sustainability.

The company's pursuit of digitalisation and efficiency maximisation has led them to also recognise sustainability as a by-product of these efforts.

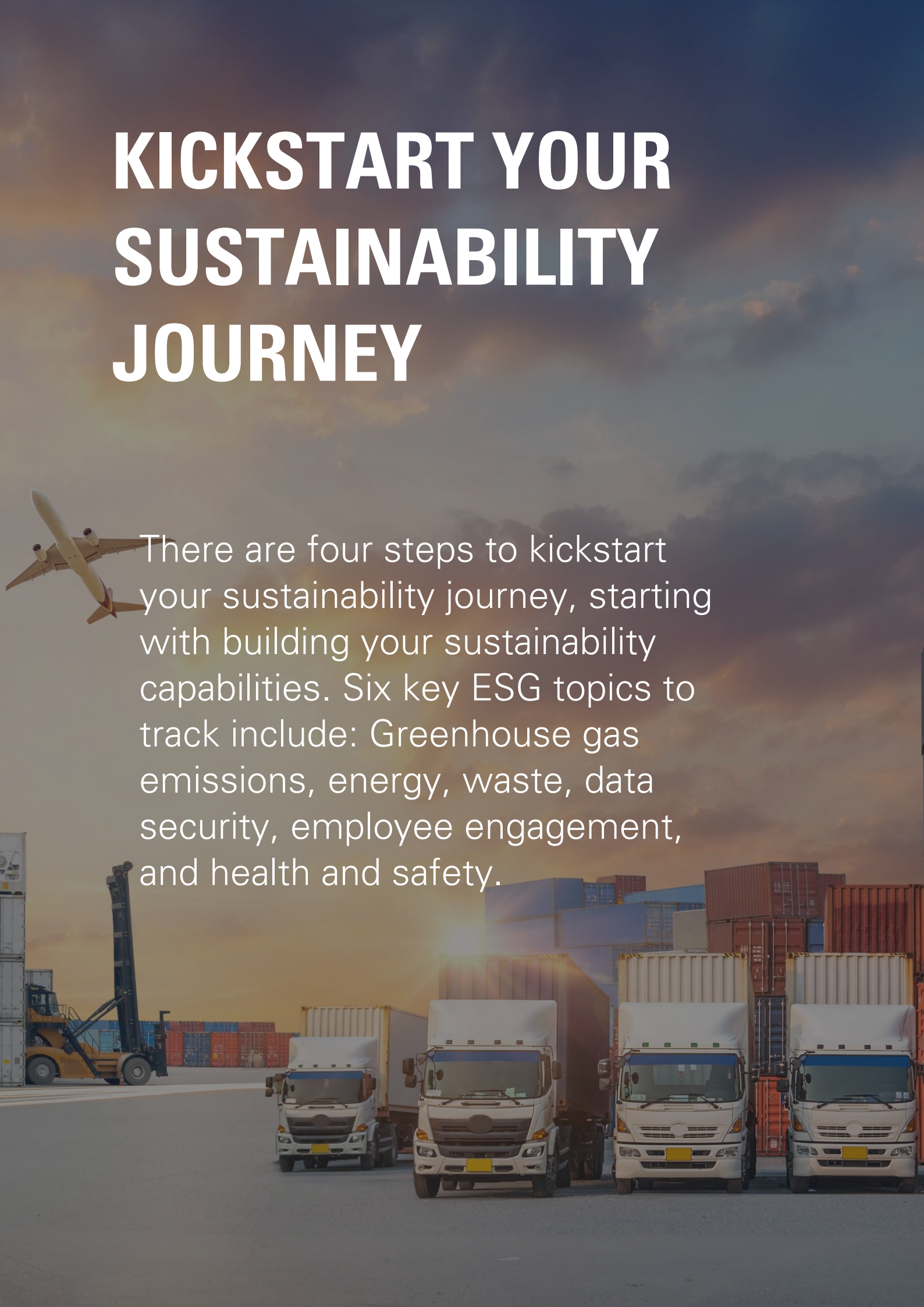
In addition, with the increasing pressure on sustainability from customers, Mr Chew decided to make key sustainability investments, such as purchasing electric vehicles, renting a building with solar rooftop, and using alternative cooling materials to reduce emissions. He was able to implement some of these initiatives with support from the Productivity Solutions Grant by Enterprise Singapore.

Although Mr Chew noted that recouping the cost of technologies for sustainability may take some time, he believes that everyone will head in that direction eventually.



It is therefore important for SFS Global Logistics to stay ahead and secure market share. He has attributed their sustainability investments as a “secret weapon” behind many of the contracts successfully awarded to the company.

KICKSTART YOUR SUSTAINABILITY JOURNEY



There are four steps to kickstart your sustainability journey, starting with building your sustainability capabilities. Six key ESG topics to track include: Greenhouse gas emissions, energy, waste, data security, employee engagement, and health and safety.

KICKSTART YOUR SUSTAINABILITY JOURNEY

You may consider these four steps to embark on your sustainability journey.

Figure 4: Sustainability kickstart checklist



1. BUILD YOUR SUSTAINABILITY CAPABILITIES



Build knowledge

To build up in-house sustainability knowledge, you should first identify specific areas where your existing employees lack expertise. New green skills include:



TRACKING ENVIRONMENTAL DATA

such as carbon emissions across transportation, warehousing, and administrative activities



MANAGING DIFFERENT WASTE STREAMS

in warehousing operations with circular strategies



DEVELOPING INNOVATION STRATEGY

to transform your business towards green logistics

After identifying skills gaps, you may consider sending your employees for skills development from training providers¹⁰, or commissioning external support from advisors and consultancies.



Dedicate manpower

There should be a dedicated sustainability lead – either by appointing an internal candidate or through an external hire – to drive your company's sustainability strategy.

A designated sustainability lead creates accountability for targets and drives progress toward meeting these goals. The sustainability lead can also facilitate coordination and communication among different departments to consolidate sustainability data and implement cohesive sustainability initiatives.

¹⁰ See Appendix for examples of training courses that may be suitable for the logistics sector.



Enable organisational systems for sustainability

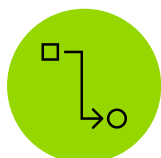
Companies should build enabling organisational systems that support sustainability.

Firstly, there needs to be strong leadership buy-in and clear commitment from top management to prioritise sustainability in decision-making.

Next, sustainability should be integrated into your company's policies, cultures, and processes. This include establishing a clear framework for operationalising sustainable practices, such as green procurement and workplace health and safety policies.

Lastly, your company should engage and get employees on board in pushing the sustainability agenda, since they will play an integral part in implementing sustainability initiatives and new technologies.

2. PLAN AND MEASURE YOUR SUSTAINABILITY PERFORMANCE



Review strategic risks and opportunities

Review your business strategy by identifying strategic risks and opportunities that global, national, or sector-specific sustainability trends may present to your business. For instance, companies like Yusen Logistics have set their own corporate targets in line with Singapore's national target to become Net Zero by 2050.

Your company's management and board have a fiduciary duty to disclose and address these risks. They need to be thoroughly informed and spend adequate time to address the impact of these risks on the company.



Conduct materiality assessment

Engage stakeholders to identify and prioritise the most material or important ESG topics to your business. You can engage stakeholders through different means – including surveys, interviews, focus group discussions, or using relevant proxies.



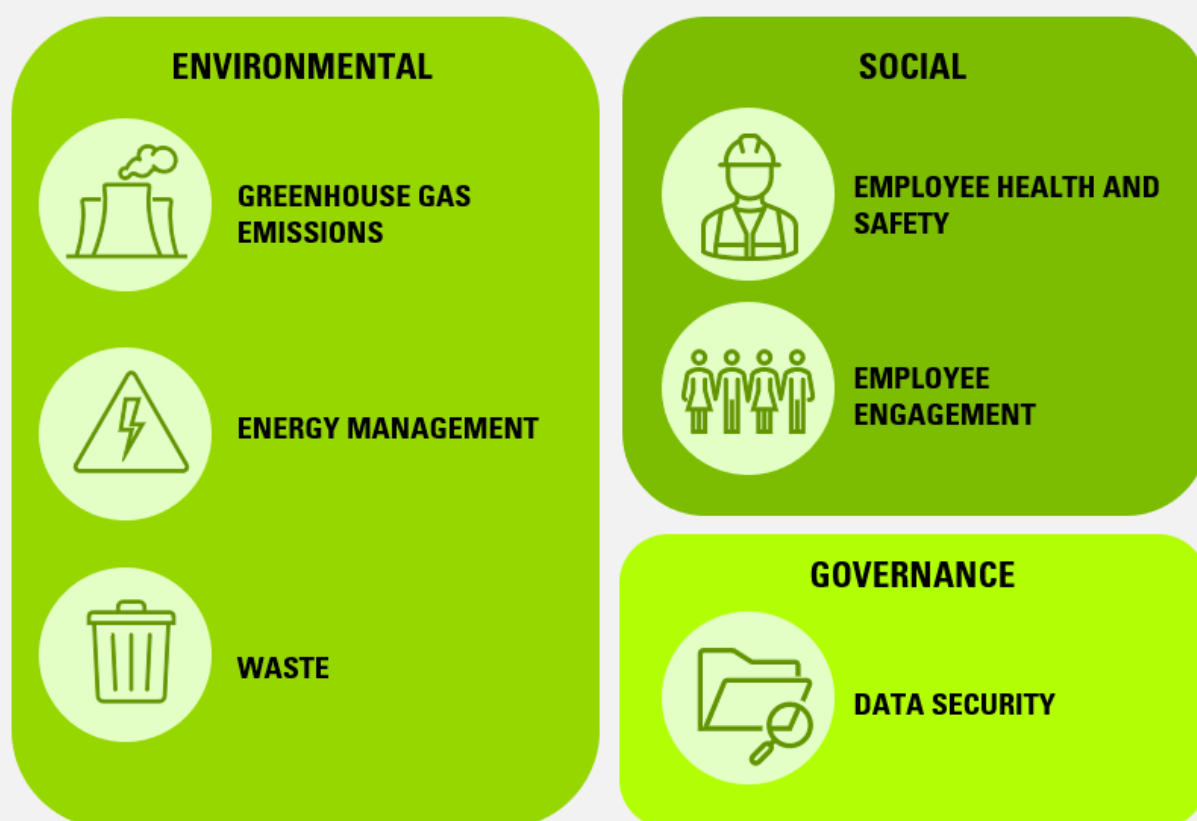
Develop sustainability strategy

Based on the findings above, develop a holistic sustainability strategy that meets the needs of stakeholders, society and the environment, while creating a competitive advantage for your company. For example, companies can offer new green transportation services or energy management services on top of warehousing management to boost revenues.

TOP SIX MATERIAL TOPICS FOR SINGAPORE'S LOGISTICS SECTOR

Based on consultations with industry stakeholders and with reference to global frameworks including Global Reporting Initiative (GRI) and Sustainability Accounting Standards Board (SASB), there are six material topics that logistics companies are most concerned about, and these can be a starting point for logistics businesses to track sustainability performance.

Figure 5: Top six ESG material topics for logistics businesses

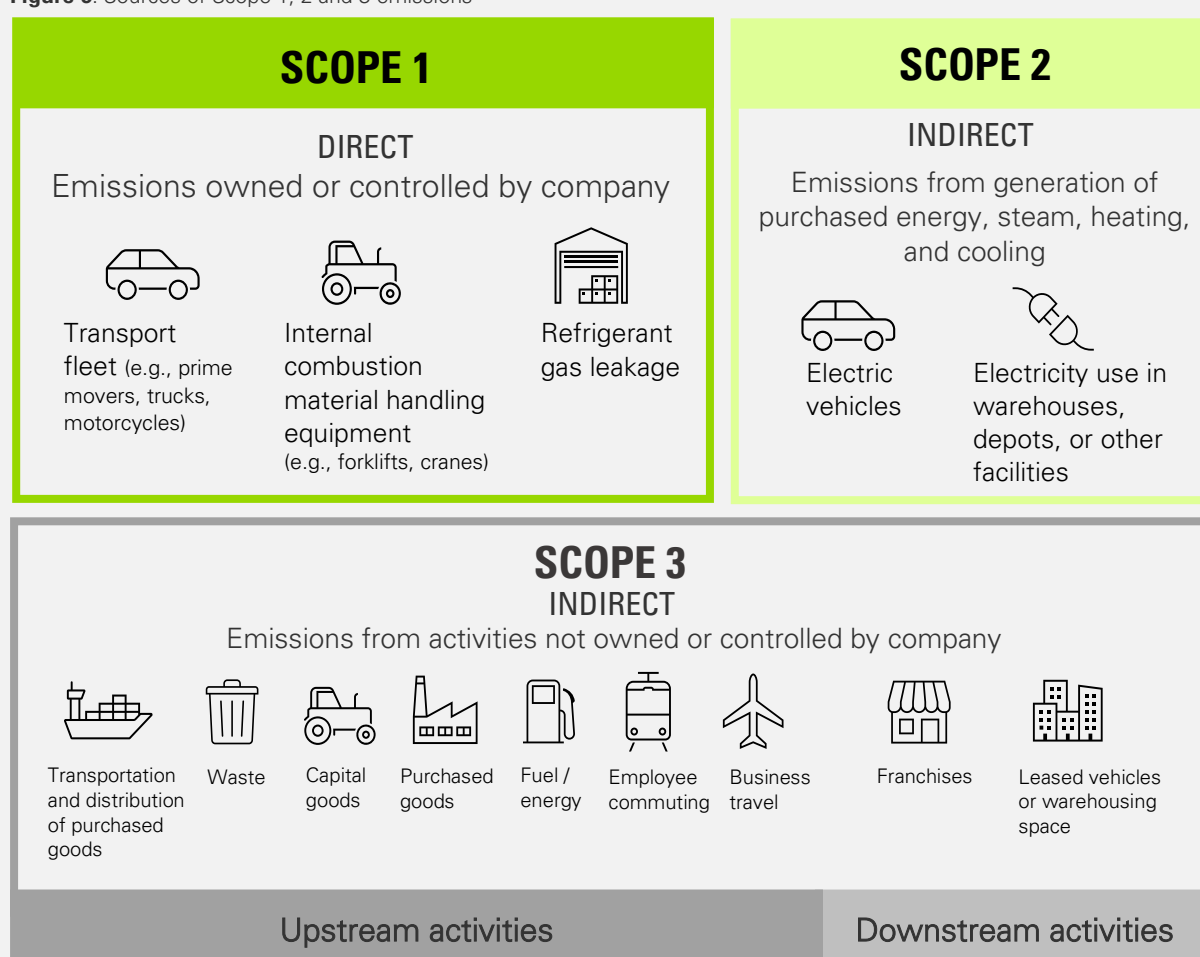


Key environmental topic #1: Greenhouse gas emissions and energy management

The management and reduction of greenhouse gas (GHG) emissions is key as countries and major corporates respond to the urgency of addressing climate change by setting emissions reduction goals.

You will need to first identify the boundaries of your company's responsibility for GHG emissions. There are two approaches¹¹ – according to either its share of equity in the operations (equity share approach) or the operations which it has control in (control approach). Depending on the accounting approach, emissions will then fall into different categories (shown in Figure 6).

Figure 6: Sources of Scope 1, 2 and 3 emissions



Companies should first focus on its Scope 1 and 2 emissions, as they constitute the most actionable part of a company's total emissions, and are often the priority for

¹¹ "A Corporate Accounting and Reporting Standard", GHG protocol, 2004

corporate customers with decarbonisation targets. You may also refer to international standards that guide companies to manage their GHG emissions, [here](#).

a) SCOPE 1 EMISSIONS

For the logistics sector, Scope 1 emissions are typically generated from vehicle fuel emissions, or refrigerant gas leakage. Fuel emissions from transportation activities can be calculated based on vehicle types and usage.

They are also generated from cargo-handling and warehousing activities, such as from fuel-combusting like diesel cranes and forklifts.

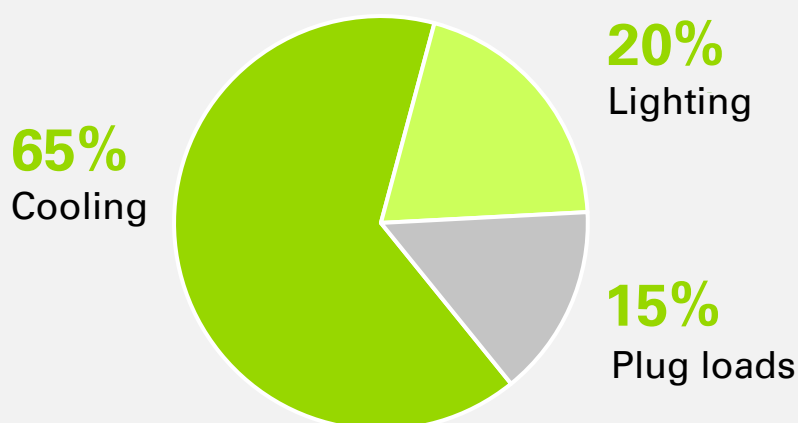
b) SCOPE 2 EMISSIONS AND ENERGY MANAGEMENT

Scope 2 emissions arise from consumption of energy, typically reflected in companies' electricity bills. Cooling typically represents the largest source of energy consumption in air-conditioned or cold storage warehouses.

Table 1: Breakdown of typical energy consumption in an air-conditioned and non-air-conditioned warehouses

TYPE OF WAREHOUSE	NON-AIR CONDITIONED	AIR CONDITIONED	COLD STORAGE (BELOW - 20°C)
Energy consumption (kWh/sq ft/year)	6	25	63

Figure 7: Breakdown of typical energy consumption in an air-conditioned warehouse



Source: Aggregated solution provider's estimates based on client installations

Key environmental topic #2: Waste

Waste is a pressing issue as Singapore's only landfill is estimated to fill up by 2035. One of the priority waste streams identified under the Ministry of Sustainability and the Environment (MSE)'s Zero Waste Master Plan is packaging waste.

Waste generated by logistics companies include shrink wrapping used in the warehouse, or packaging used by upstream suppliers to protect items in transit.

While logistics companies have no control over the primary packaging of a product, they have some control over secondary and tertiary packaging.

Besides packaging, other waste produced by cargo-handling companies include engine oil and metal scraps generated during maintenance.



PRIMARY PACKAGING

Packaging in direct contact with the product (for example, aluminum cans, plastic bottles, plastic chip pouches)



SECONDARY PACKAGING

Packaging used outside of primary packaging to group designated quantities of goods together (for example, cardboard boxes used during order fulfillment when goods from suppliers are repacked or protective packaging for e-commerce goods)



TERTIARY PACKAGING

Transit packaging that groups larger quantities of secondary packaging into a distribution unit, for easier handling and transport of goods (for example, shrink wrap used in warehouse storage to bundle carton boxes together that are then lifted by forklifts, and wooden pallets to load and unload goods from trucks during transportation)

Key social topic #1: Employee health and safety

Establishing a healthy and safe work environment free of injuries is recognised as a human right and addressed in intergovernmental organisations ¹².

Ensuring the health and safety of employees is critical in the logistics sector as companies may be held legally liable if there are injuries or fatalities at work.

In warehousing, especially during peak seasons, operations typically run around the clock. Companies should ensure that their employees do not work more than the maximum of 72 hours of overtime in a month, according to Singapore's Ministry of Manpower (MOM)'s guidelines. In the cold chain space, employees will only be able to work if they are provided with adequate personal protection equipment and rotate their cold shifts.

Employee health and safety is also crucial for companies to retain their workforce, as employees are only willing to work in safe conditions.

NOTE: Employees may have concerns that need to be addressed when adopting sustainability solutions. For instance, there is a concern among drivers that EVs have a higher risk of fires. This concern should be contextualised and communicated properly to the drivers that the probability of fire incidents happening is extremely low at 0.02%¹³ as of 2024.

¹² ['Occupational Health and Safety', Global Reporting Initiative, 2018](#)

¹³ ['EV fire cases rise with growing adoption of such cars', The Straits Times, 2023](#)

Key social topic #2: Employee engagement

Employee engagement encompasses various aspects related to how a company engages, supports, and fosters a positive work environment for its employees.

This is vital for logistics companies to attract and retain employees, particularly as the sector faces a short supply of labour. Some strategies that companies have employed to boost employee engagement include having regular check-ins with employees to address their issues and concerns, planning activities that improve employee welfare, and providing learning opportunities.

Conducting frequent employee engagement surveys will allow you to understand employee sentiment on the ground, so that you can intervene if staff morale is low.

Key governance topic: Data security

Data security is defined by the SASB¹⁴ as the “management of risks related to the collection, retention, and use of sensitive and/or proprietary customer or user data”.

Data security is especially relevant for logistics companies serving e-commerce customers, as they are concerned about the security of payment transactions. More consumers are aware of their privacy rights, resulting in increased scrutiny of a company’s data breaches and data governance frameworks. A leak of customers’ data can result in loss of trust and reputational damage to the company.

Additionally, with increased digitalisation and connectivity of the ecosystem, the surface area for cyberattacks has become greater. For instance, companies will need to ensure that physical-digital tools such as route optimisation and demand planning software, warehouse robots, and autonomous vehicles are secure, as external hacks can pose risks to operational disruption and even staff safety.

¹⁴ [‘Materiality Finder’, SASB Standards, 2022](#)

Measure your sustainability footprint

After establishing your company's top material topics, you should begin to measure and track performance for each identified topic. Tracking sustainability data is important as it enables you to:

Comply with regulatory requirements:



There are increasing regulatory requirements for disclosure of sustainability data, such as SGX's requirements for sustainability reporting and NEA's mandatory packaging reporting requirements, for example if logistics companies produce their own packaging. Even if logistics companies are not directly impacted by these regulations, their affected customers or parent company may still request for sustainability data.



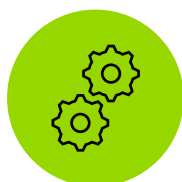
Demonstrate transparency through disclosures:

Public disclosure of sustainability data demonstrates transparency, which is increasingly demanded by customers and investors.



Set benchmark for improvement:

Quantifying sustainability performance will provide a baseline to benchmark the effectiveness of companies' future sustainability efforts.



Identify areas to be improved for operational efficiency:

Monitoring sustainability metrics allows companies to identify areas for improvement in operational efficiency, which can also translate to cost savings.



Allow prioritisation of efforts:

Data-driven insights drive targeted strategies to address sources that contribute most to the sustainability problem. For instance, if Scope 1 emissions form most of a company's emissions, you can focus efforts on electrifying diesel forklifts or trucks. If most are from Scope 2, identify the asset that consumes the most electricity in your warehouse, such as the chiller system, and examine options such as energy efficiency, or Cooling-as-a-Service.

You may refer to international standards that guide companies to manage GHG emissions [here](#).

Communicate sustainability disclosures

As your company matures in collecting sustainability data, consider proactively communicating sustainability efforts in line with international and internationally recognised standards. Such transparency improves credibility with stakeholders and signals sustainability commitment to customers.

Since 2017, only SGX-listed companies have been required to produce a sustainability report, and may be required to report International Sustainability Standards Board (ISSB)-aligned climate-related disclosures (CRDs) starting from financial year 2025.

Moving forward, mandatory CRDs might be extended to large non-listed companies with annual revenue of at least S\$1 billion in financial year 2027, and possibly companies with annual revenue of at least S\$100 million from 2030 and beyond.

External assurance on your sustainability reports is also expected for companies which are required to produce one; the Sustainability Reporting Advisory Committee (SRAC) recommends that assurance is to be conducted using either a Singapore standard equivalent to ISSA 5000 General Requirements for Sustainability Assurance Engagements or SS ISO 14064-3 Specification with guidance for the verification and validation of GHG statements. Such assurance can be conducted by third-party conformity assessment (e.g., certification and verification) against internationally recognised standards by accredited independent third-party Conformity Assessment Bodies (CABs)¹⁵.

Most sustainability reports presently published by logistics companies in Singapore have adopted GRI standards, but transport companies can also refer to SASB Standards which prescribes Road Transportation sector-specific disclosure topics and metrics.

You can choose from [different reporting frameworks](#) that are best suited to your objectives. If your company lacks initial capabilities to conduct reporting, consider engaging an external consultant to guide on reporting frameworks and build internal capabilities to carry on reporting after the inaugural report.

¹⁵ Conformity Assessment Bodies (CABs) refer to in-house, public organisations or third-party entities that provide testing, inspection, certification, or verification services. Such independent third-party conformity assessment (e.g., certification and verification) against internationally recognised standards can offer a credible way for businesses to communicate sustainability efforts.

Sustainability Report Card for logistics companies

Logistics companies should actively progress to report against global standards such as ISSB, as well as local guidelines such as those mandated by SGX or SRAC. For those that are just getting started, we have identified the following topics and metrics that are likely to be critical for logistics SMEs in Singapore based on our industry consultation.

Table 2: Sustainability report card for logistics companies in Singapore

Metrics	Units
Absolute Greenhouse Gas Emissions ("GHG") ¹⁶ a) Scope 1, and b) Scope 2	tCO ₂ e ¹⁷
Greenhouse Gas Emissions ("GHG") intensity ¹⁸	tCO ₂ e per tonne delivered per kilometre (Transport Vehicles; Scope 1 and 2)
	tCO ₂ e per tonne moved per hour (Cargo-handling, Warehousing Material Handling Equipment; Scope 1 and 2)
	tCO ₂ e per m ³ (Warehousing Scope 2)
Absolute energy consumption	kWh
Energy consumption intensity	kWh per m ³
Total waste generated	Kg / Tonne
Total waste created	Kg / Tonne
Recordable work-related injury or fatalities	Number of cases per employee
Level of employee engagement	Employee Net Promoter Score = % of employees who will recommend the employer - % of detractors who wouldn't
Data breaches	Number

¹⁶ Reporting Scope 1 and 2 emissions is the starting point for logistics companies, but Scope 3 requirements will eventually become more prevalent.

¹⁷ tCO₂e refers to tonnes of carbon dioxide equivalent emissions

¹⁸ We suggest that tCO₂e per tonne delivered per km be used as a measure of GHG intensity for transport vehicles, which will take into account driver behaviour and the vehicle fuel efficiency. It could be useful to evaluate subcontractors/vendors based on this common measure. Disclosure of Scope 1 and 3 emissions intensity using the same metric will also allow greater accountability as it can be used as a basis for the reporting company to benchmark against its vendors. The metric of tCO₂e per dollar revenue might not be a fair representation due to price differentiation and other pricing strategies, but it could be useful for sectoral wide comparisons across different sub-sectors, or for an individual company to track its own progress as its business expands.

Metrics and data collection

Sustainability reporting needs to be informed by high quality data. Here are some pointers on where pertinent sustainability data is likely to be found.

Table 3: Obtaining data for key sustainability metrics for logistics companies

ENVIRONMENTAL				
Material topic	Metrics	Reference for metrics	How to obtain data	Department to obtain data
Greenhouse Gas Emissions ("GHG")	Absolute emissions by: (a) Total; (b) Scope 1, Scope 2	SGX Core ESG Metrics	<ul style="list-style-type: none"> Fuel bills, minus any fuel discounts obtained Vehicle log card for vehicle model and vehicle type Vehicle odometer or telematics system for distance travelled 	<ul style="list-style-type: none"> Finance/ Procurement Operations Facilities Management
	Emission intensities by: (a) Total; (b) Scope 1, Scope 2			
Energy consumption	Total energy consumption	SGX Core ESG Metrics	<ul style="list-style-type: none"> Electricity bills 	<ul style="list-style-type: none"> Finance/ Procurement Facilities Management
	Energy consumption intensity			
Waste generation	Total waste generated in company's facilities	SGX Core ESG Metrics	<ul style="list-style-type: none"> Purchase receipts of packaging (e.g. carton boxes, shrink wrap rolls etc.) 	<ul style="list-style-type: none"> Waste collection vendors Facilities Management Finance/ Procurement
	Total waste created			

SOCIAL				
Material topic	Metrics	Reference for metrics	How to obtain data	Department to obtain data
Occupational health & safety	Recordable work-related injuries	SGX Core ESG Metrics	<ul style="list-style-type: none"> • Work injury compensation record or MOM incident report 	<ul style="list-style-type: none"> • Operations • Human Resources
Employee engagement	Levels of employee engagement	SASB	<ul style="list-style-type: none"> • Employee Engagement survey 	<ul style="list-style-type: none"> • Human Resources
GOVERNANCE				
Data security	Data breaches	SASB	<ul style="list-style-type: none"> • Security logs or monitoring systems 	<ul style="list-style-type: none"> • IT

IMPROVE YOUR SUSTAINABILITY PERFORMANCE

There are four strategies to improve your sustainability performance:

Reduce consumption, switch to low carbon sources, improve forecasting, and collaboration. To compare cost effectiveness of solutions, the Marginal Abatement Cost Curve can be used.

IMPROVE YOUR SUSTAINABILITY PERFORMANCE

We have qualified four areas where different solutions can improve your sustainability performance.

Figure 8: Qualifications to improve sustainability performance

1 Reduce unnecessary consumption



Minimise energy, fuel, and material used to improve operational efficiency, leveraging data to identify and target sources of waste

Solutions:

- LED Lights
- IoT motion sensors
- Telematics
- Downgauging packaging
- Energy audits
- Energy management systems

2 Improve forecasting and data visibility



Enhance demand planning with advanced analytics to better forecast customer demand, optimise warehouse space and vehicle scheduling, reducing waste in the system

Solutions:

- Demand planning tools
- Route optimisation tools

3 Invest in low carbon sources



Reduce carbon footprint by switching to cleaner sources of energy, such as diesel to electric vehicles and utilising renewable energy in warehouses

Solutions:

- Electric vehicles
- Electric material handling equipment
- Hydrogen fuel-cell vehicles
- Solar panels
- Solar leasing

4 Collaborate for increased utilisation



Share resources and assets among multiple parties to increase utilisation, reduce wastage, and lower costs

Solutions:

- Consolidation hub
- Pooling platform

Prioritising sustainability investments

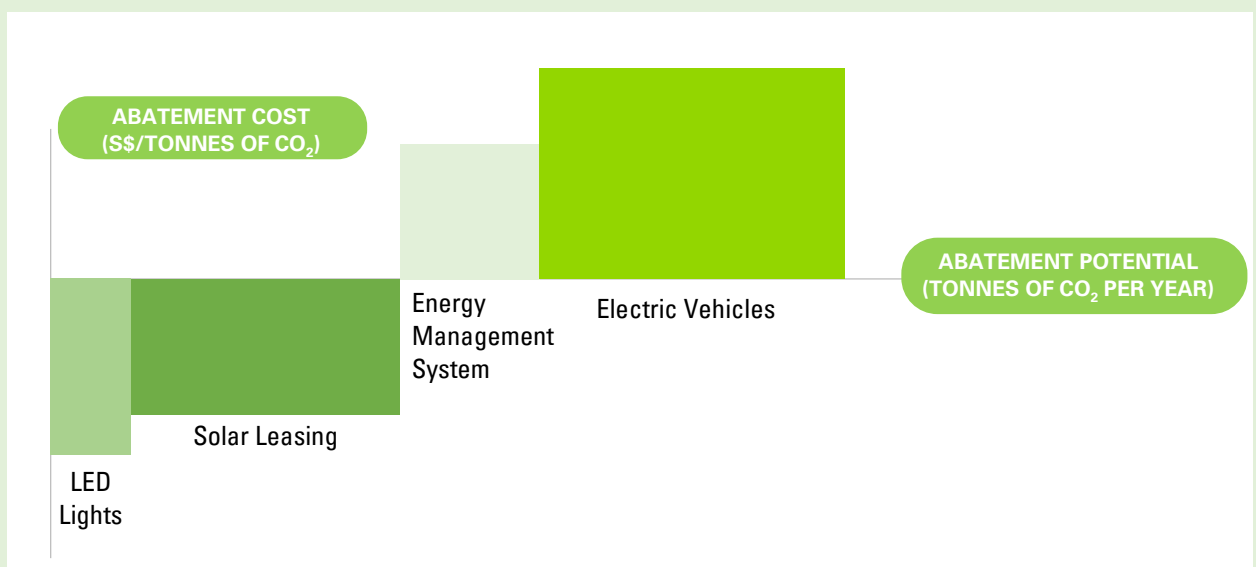
To improve your sustainability performance, you can invest in deploying sustainability solutions such as energy-efficient systems in warehouses, low-carbon technologies such as solar energy and electric vehicles, or adopting novel operating models such as shared fulfilment.

Factors to consider when evaluating sustainability options:

- Which portfolio of solutions are best suited to your needs? Are there synergies between the solutions chosen?
- What are the capital and operational costs of this solution?
- What is the Return on Investment (ROI), and the gestation period before the ROI is reaped?
- What is the impact of environmental benefit (e.g., carbon abatement, waste reduction, energy reduction) the solution can provide?
- What is the technological feasibility of the solution? Is it compatible with existing infrastructure?
- How should the chosen solutions be phased in the short, medium, and long term?

To compare the cost-effectiveness between solutions, you can use the Marginal Abatement Cost Curve, which ranks the abatement potential of the solutions with the abatement costs involved in implementation.

Figure 9: Marginal Abatement Cost Curve to prioritise sustainable investments



The Marginal Abatement Cost Curve is interpreted as such:

- The abatement cost is calculated by: $(\text{Total investment cost}) - (\text{total savings from utilisation})$, and divided by the avoided emissions.
- Each solution is plotted as a box, and ranked from the lowest to the highest abatement cost from left to right.
- The cheapest solution on the leftmost can be implemented first, and so on, working rightward, until the emissions reductions target is achieved or the spending budget is reached.

Communicate results of sustainability initiatives

Your company should document the results of your sustainability initiatives. These can be communicated to clients through sustainability reports to strengthen your company's sustainability credentials, as well as shared internally to build momentum and support among employees for further efforts.

An aerial photograph of a complex multi-level highway interchange with several overpasses and ramps. The image is overlaid with a semi-transparent blue geometric network of lines and dots, resembling a digital or data network. The text is positioned in the upper left quadrant.

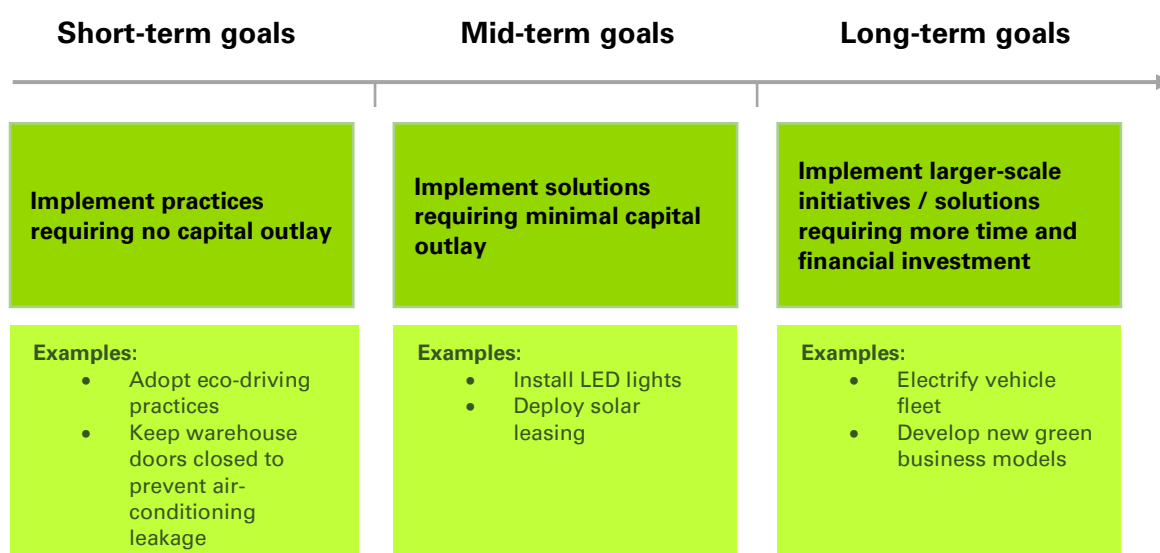
SUSTAIN THE JOURNEY

To maintain the sustainability momentum, you can develop a sustainability roadmap and targets, innovate new business and operating models, drive sustainable transformation, and pursue sustainability standards.

Set sustainability roadmap and targets

Your company should consider establishing a multi-year execution roadmap, with realistic short-, mid-, and long-term goals and targets.

Figure 10: Multi-year execution roadmap of short-, mid-, and long-term goals



Targets can be set based on customer requirements, national goals, or in line with the latest climate research through the SBTi, with varying levels of specificity. For example, to meet the overall emissions reduction goal, YCH Group has broken it down into specific solution-oriented goals relating to fleet electrification, renewable energy, and green buildings. Establish the rationale and business case behind these goals to ensure that they are realistic and achievable.

Sustainability goals should be reviewed regularly and improved over time, taking into account changes to standards, stakeholder expectations, and business strategy.

Innovate new business and operating models and establish brand differentiation

After achieving success in improving your company's sustainability performance, you may market your services as sustainable through achieving a lower carbon footprint or lower packaging use.

Adopting sustainable operating models and technologies help improve branding and can differentiate your company from competitors as a green logistics company. This unlocks new customer markets and enables your company to command a premium for differentiated services.

You can even go further to develop new and innovative products, services, and business models with a sustainability edge. For example, leverage existing expertise to offer services such as a fleet optimisation platform or supplying sustainable packaging solutions, on top of existing warehousing and transportation services. Creating such new revenue streams will increase your market share and profitability, while strengthening your value proposition.

Drive organisation-wide sustainability transformation

Sustainability extends beyond the job of a sustainability director or department. Your company needs to embed sustainability into the organisational culture and promote company-wide collaboration so everyone will play a part.

Sustainability goals may be integrated into the employee performance management system, including the design of management and staff incentives, as well as factored into capital investments and upgrades planned.

This allows your company to achieve operational excellence and generate cost savings through greater resource efficiency.

Adopt sustainability standards and certification

Obtaining certifications based on international and internationally recognised sustainability standards allows companies to meet or proactively exceed regulatory requirements related to sustainable practices.

For instance, packaging-related standards like Programme for the Endorsement of Forest Certification (PEFC), BRC Global Standard for Packaging, and TR 109 provide guiding frameworks to determine your packaging strategies in line with business and sustainable goals. Your company can also follow NEA's Mandatory Packaging Reporting and the future Extended Producer Responsibility scheme for packaging waste management.

Sustainability certifications build credibility and trust among investors and customers in companies' sustainability claims. Companies wishing to access overseas markets that prioritise sustainability may also benefit from relevant certifications.

Consider engaging a Conformity Assessment Body (CAB) accredited by the Singapore Accreditation Council (SAC) to support your certification journey. As part of the CABs, the Testing, Inspection and Certification (TIC) players are assessed according to international standards, and with the SAC being a signatory to [Mutual Recognition Arrangements](#), these international frameworks will enable you to export your goods and services without the need for re-testing or certification. Some examples of sustainability areas supported by SAC accredited CABs include ISO 14001, PEFC chain of custody, ISO 50001, and ISO 14064.

CASE STUDY

YCH GROUP'S COMMITMENT TO SUSTAINABILITY

YCH Group is a 7PL supply chain and logistics provider, offering end-to-end solutions including supply chain management, human capital, facility and energy management, and warehousing and distribution services.

YCH started its sustainability journey early in 2010 with green building plans. Its supply chain facility was eventually awarded the BCA Green Mark (Platinum) and LEEDS Platinum certification in 2016.

YCH has also drawn out a detailed roadmap with an ambitious target to reach Net Zero by 2050. YCH has broken down this overall target in a phased approach, for instance, YCH has a target of reducing its scope 1 and 2 emissions by 10% in 2024, and further reduce this by 30% in 2026.



GET STARTED TODAY

MNCs are increasingly demanding for logistics partners to provide visibility on their sustainability policies and data, while local and global regulations on sustainability reporting will require even private run companies to track and improve on their sustainability performance over time.

To future-proof your business, start to systematically address risks that sustainability presents and turn them into your competitive advantage by:

- Engaging stakeholders to conduct a business review and materiality assessment
- Building internal sustainability knowledge
- Measuring and reporting sustainability performance
- Crafting an integrated sustainability strategy
- Developing the business case for sustainability investments and conducting pilots
- Setting sustainability targets
- Driving organisation-wide sustainability transformation

We look forward to partnering you in building a more sustainable logistics industry.

Feel free to reach out for support, or to share your success stories at slamail@sla.org.sg or tl_sustainability@enterprisesg.gov.sg.

RESOURCES



RESOURCES

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For more resources, please visit SLA's website [here](#).

ASSUMPTIONS FOR SECTOR LEVEL EMISSIONS ESTIMATES

Below are the assumptions for calculating the total carbon emissions of the sector.

VEHICLE/ EQUIPMENT TYPE	POPULATION ¹⁹	FUEL EMISSION FACTOR ²⁰	AVERAGE DISTANCE TRAVELLED	AVERAGE FUEL EFFICIENCY	CARBON EMISSIONS OF EACH UNIT	TOTAL CARBON EMISSIONS OF SECTOR
Motorcycles	~700 (motorbikes used for postal and courier)	Petrol (9 kg/US Gallon)	17.5 km per day X 260 working days = 4,550 km	15 km/L	303 L of petrol = 718 kg CO ₂	502 tonnes CO ₂
Prime Mover	5,454	Diesel (10 kg/US Gallon)	40 km per trip X 18 trips per day X 365 working days = 262,800 km (FGD validation)	1.6km/L	164,250 L of diesel = 432,236 kg CO ₂	2.4 million tonnes CO ₂
Refrigerated vehicles	3,156	Diesel (10 kg/US Gallon)	29,500 km (assumed to be same as light-goods)	6.5km/L	4,538 L of diesel = 11,942 kg CO ₂	14,322 tonnes CO ₂
Light-goods	93,987 (Lorries, Vans only)	Diesel (10 kg/US Gallon)	29,500km	11.2 km/L	2,633 L of diesel = 6,931 kg CO ₂	651,424 tonnes CO ₂
Heavy-goods and very-heavy- goods	27,764 (Lorries, Vans)	Diesel (10 kg/US Gallon)	39,500km	3.3km/L	11,970 L of diesel = 31,500 kg CO ₂	874,566 tonnes CO ₂
Cranes	446	Diesel (10 kg/US Gallon)	260 days X 8 hours = 2,080 hours	16 L/ hour	33,280 L of diesel = 87,579 kg CO ₂	39,060 tonnes CO ₂
Diesel forklifts	5,415	Diesel (10 kg/US Gallon)	260 days X 8 hours = 2,080 hours	2.6 L/hour	5,408 L of diesel = 14,232 kg CO ₂	77,066 tonnes CO ₂

¹⁹ ['Annual Vehicle Statistics 2023'](#), LTA, 2023

²⁰ ['Emission Factors from Cross-Sector Tools'](#), GHG Protocol, 2017

GOVERNMENT POLICIES AND THEIR IMPACT

CARBON TAX

For industrial facilities that emit an annual direct GHG emissions of 25,000 tonnes, the carbon tax will be raised to S\$25/tCO₂e in 2024 and 2025, and S\$45/tCO₂e in 2026 and 2027, with a view to reaching S\$50-80/tCO₂e by 2030²¹.

Impact:

Although the carbon tax is currently only levied on facilities that emit at least 25,000 tCO₂e, companies may experience higher electricity costs as the power generation companies may pass down the additional costs from the carbon tax to their customers.

VISION OF 100% CLEANER VEHICLES BY 2040

Commercial Vehicle Emissions Scheme (CVES)

- Applies to all new and used imported Light Commercial Vehicles with maximum laden weight not exceeding 3,500 kg effective from 1 April 2023 to 31 March 2025
- Commercial vehicles are categorised into three bands resulting in a S\$15,000 surcharge for the most pollutive vehicles to a S\$15,000 incentive for the least pollutive vehicles

Impact:

There would be cost savings for the purchase of commercial vehicles that have the lowest emissions across the identified pollutant categories.

Enhanced Early Turnover Scheme (ETS)

- Applies to Light Commercial Vehicles and Heavy Commercial Vehicles, with ETS for Light Commercial Vehicles ending on 31 March 2025
- Replacement vehicles without tailpipe emissions will receive the highest incentives

Impact:

The ETS Incentive complements the CVES to bridge the upfront cost of electric LCVs in CVES Band A.

²¹ [‘Carbon Tax’, National Climate Change Secretariat Singapore](#)

SUSTAINABILITY REPORTING REGULATIONS**SGX Listing Rule 711A**

Every issuer must prepare an annual sustainability report on a 'comply-or-explain' basis, covering the below components:

- Material ESG Factors
- Climate-related disclosures consistent with recommendations of the Taskforce for Climate-related Financial Disclosures (TCFD). By 2024, issuers in the transportation sector cannot exclude this.
- Policies practices and performance in relation to material ESG factors identified
- Targets in relation to each material ESG factor identified
- Sustainability reporting framework
- Board statement

Impact:

If your company is listed, or is under a parent company that is listed, you have to track your sustainability data and prepare a sustainability report, or face penalties by SGX.

Sustainability Reporting Advisory Committee (SRAC) Recommendations Timeline:

FY 2025	All listed issuers Report ISSB aligned climate-related disclosures
FY 2026	All listed issuers Report Scope 3 GHG Emissions
FY 2027	NLCos S\$1 billion annual revenue Report ISSB aligned climate-related disclosures All listed issuers Obtain external assurance over Scope 1 & 2 GHG Emissions
FY 2029	NLCos \geq S\$1 billion annual revenue Report Scope 3 GHG Emissions Obtain external assurance over Scope 1 & 2 GHG Emissions
~FY 2030	NLCos \geq S\$100 million and < S\$1 billion annual revenue Potential reporting of ISSB aligned climate-related disclosures, reviewed in 2027

The Sustainability Reporting Advisory (SRAC), an industry-led committee set up by ACRA and the Singapore Exchange Regulation (SGX RegCo), has issued recommendations to advance climate reporting in Singapore. ACRA and SGX RegCo have completed a public consultation on the SRAC's recommendations in 2023, and will consider public feedback before finalising the recommendations in 2024.

The SRAC has recommended that large non-listed companies (NLCos) might be subject to climate reporting, which could be cascaded down to smaller non-listed companies in 2030 and beyond.

Reporting of Scope 3 for listed issuers would mean that logistic SMEs need to report their Scope 1 and 2 data to customers.

Companies subjected to mandatory climate reporting should obtain external assurance on GHG Scope 1 and Scope 2 emissions. The assurance can be provided by ACRA-registered audit firms and TIC firms accredited by the SAC.

EU's Corporate Sustainability Reporting Directive

From 2025, Singapore parent companies with EU subsidiaries that fulfil two of the listed criteria must produce a sustainability report:

- Net turnover of €40 million or more
- Balance sheet of €20 million or more
- Minimum of 250 employees

From 2028, there is an additional requirement for non-EU companies to report if the following criteria are met:

- At least one EU subsidiary that is in scope (i.e. listed on an EU regulated market or "large") or at least one EU branch that generates more than €40 million revenue in the preceding year
- Consolidated net turnover generated in the EU exceeds €150 million for each of the last two consecutive fiscal years

If you have a European subsidiary and fulfil the requirements under the Corporate Sustainability Reporting Directive, you will be required to produce a sustainability report.

SUSTAINABILITY PROGRAMMES AND GUIDES

ENTERPRISE SUSTAINABILITY PROGRAMME (ESP) – SUSTAINABILITY COURSES

The ESP – Sustainability Courses aim to help local enterprises and TACs build awareness and knowledge of sustainability, covering key sustainability concepts, topics, trends, risks and opportunities. Find out more [here](#).

Foundational Courses

Covering key sustainability topics in decarbonisation, circular economy, sustainability reporting, and waste management

Decarbonisation Courses

Covering topics such as carbon accounting, setting of targets and plans, means of decarbonisation, and identification of key decarbonisation pathways

Sustainable Finance Courses

Covering topics such as the background of sustainable finance and its instruments, and how enterprises can secure sustainable finance

Participants will receive a Certificate of Completion from training providers upon course completion.

Companies can also tap over 300 sustainability-related learning courses supported by Workforce Singapore and SkillsFuture Singapore. Companies can find these courses on the [MySkillsFuture website](#).

GOVERNMENT SUSTAINABILITY PROGRAMMES

Enterprise Sustainability Programme (ESP)

By EnterpriseSG

The [Enterprise Sustainability Programme \(ESP\)](#) aims to support Singapore enterprises to strengthen capabilities in sustainability and capture opportunities in the green economy. It comprises a series of sustainability courses and playbooks, and supports various capability building and product development projects via the Enterprise Development Grant. Under the programme, businesses can also access different initiatives and programmes by industry partners.

Enterprise Development Grant

By EnterpriseSG

[Enterprise Development Grant \(EDG\)](#) supports projects that help companies grow and transform, including sustainability projects.

Enterprise Financing Scheme - Green

By EnterpriseSG

[Enterprise Financing Scheme \(EFS\)](#) addresses enterprises' financing needs in seven areas including green growth projects at various stages of growth.

Workforce Singapore Career Conversion Programmes

By WSG

Companies looking to reskill workers can consider applying for a Career Conversion Programme (CCP) with Workforce Singapore (WSG). There are various CCPs including the [CCP for Supply Chain and Logistics Coordinators](#) and the [CCP for Sustainability Professionals](#).

Sustainable Loan Grant Scheme

By MAS

The [Sustainable Loan Grant Scheme \(SGLS\)](#) helps corporates of all sizes defray the expenses of engaging independent service providers to validate the green and sustainability credentials of the loan.

Advanced Digital Solutions By IMDA	The Advanced Digital Solutions (ADS) grant supports the adoption of advanced technologies (e.g. AI, Robotics, Blockchain and Internet of Things, sustainability solutions) and integrated solutions (e.g. B2B solutions that integrate inventory management) that address common enterprise-level challenges at scale.
3R Fund By NEA	The National Environment Agency (NEA) 3R Fund encourages organisations to reduce waste disposed of at NEA's incineration plants and disposal facilities by implementing waste minimisation and recycling projects.
Water Efficiency Fund By PUB	The Water Efficiency Fund (WEF) provides funding for water audits, recycling plant pilots, and full-scale implementation and water-efficient technology adoption.

GOVERNMENT-SUPPORTED PARTNER PROGRAMMES

SME Kickstarter Decarbonisation Programme

By Schneider Electric

The [SME Kickstarter Decarbonisation Programme](#), supported by EnterpriseSG, provides training and mentorship to SMEs over 3 years, to chart sustainability strategies by establishing Scope 1 and 2 emissions and develop decarbonisation roadmaps.

LowCarbonSG Programme

By UN Global Compact Network
Singapore (GCNS)

Join this [capability building programme](#) that enables you to monitor and reduce carbon emissions.

Sustainability-as-a-Service Programme

By TÜV SÜD PSB

The [Sustainability-as-a-Service Programme](#) supports local companies in meeting customer and regulatory requirements through online self-assessment, training, pre-certification audit and certification.

Catalysing Sustainability in Singapore's SMEs Programme

By CDP

[This Catalysing Sustainability in Singapore's SMEs programme](#) encourages environmental disclosures and builds capacity of Singapore enterprises by encouraging them to report through CDP's questionnaire framework and platform across three themes (Climate, Water Security & Forests).

SUSTAINABILITY GUIDES

3R Guidebook for Packaging

By NEA and SMF

[The 3R Guidebook for Packaging](#) aims to provide guidance to obligated companies under the Mandatory Packaging Reporting (MPR) framework as well as companies/organisations seeking to reduce their packaging or packaging waste, to develop and implement 3R (reduce, reuse, recycle) plans in their operations.

Sustainability Playbook for Enterprises - Embarking on Your Environmental, Social, and Governance (ESG) Journey

By EnterpriseSG, Singapore Business Federation, and SkillsFuture Singapore

[The Sustainability Playbook for Enterprises](#) provides a step-by-step guide for businesses to assess your ESG readiness, and a list of relevant resources to help you get started on the sustainability journey.

Decarbonisation for Singapore Enterprises

By UN Global Compact Network Singapore (GCNS)

[The Decarbonisation for Singapore Enterprises playbook](#) shares the benefits for reducing emissions, and how businesses, especially SMEs, can kickstart their carbon management journey. The playbook supplements the nationwide LowCarbonSG programme.

Integrated Reporting for SMEs: Implementation Guidance

[This guide](#) helps SMEs understand and implement the International Integrated Reporting (IR) Framework.

Taskforce for Climate-Related Financial Disclosures Guide (TCFD)

[This guide](#) helps companies in implementing TCFD recommendations for corporate disclosures of climate-related information, through CDSB and SASB's frameworks and standards.

Sustainability Guide for Boards

[This Sustainability Guide for Boards](#) is designed to help Boards fulfil their governance role in the strategic formulation and execution of the company's sustainability vision. Specifically, it dovetails with the directions of the SGX Listing Rules 711A and 711B, which require sustainability reporting for listed companies on a 'comply or explain' basis.

Singapore Standards Council (SSC)

[SSC](#) facilitates the development, promotion and review of Standards, Technical References and Workshop Agreements in Singapore. This work is done through partnerships with the industry, academia and government organisations, under the national standardisation programme overseen by Enterprise Singapore.

More information on standards supporting sustainable business practices can be found [here](#).

International Organisation for Standardisation (ISO)

International standards development [organisation](#) that develops international standards covering all fields from security to technology to manufacturing to the environment.

Singapore Accreditation Council (SAC)

Summary of [SAC accreditation schemes](#) that apply to the Environment and Sustainability industry. Provides more information on SAC's Mutual Recognition Arrangements (MRAs). Provides information on Conformity Assessment Bodies (CABs) accredited by SAC.

Singapore Green Labelling Scheme (SGLS)

[Website](#) that provides information on the Singapore Green Label.

INTERNATIONAL AND LOCAL STANDARDS

MATERIAL TOPIC	STANDARDS
Greenhouse Gas Emissions (“GHG”)	<ul style="list-style-type: none"> • SS ISO 14001 Environmental management systems • ISO 14083 Quantification and reporting of greenhouse gas emissions arising from transport chain operations • SS ISO 14064-1 Specification with guidance at the organisation level for quantification and reporting of greenhouse gas emissions and removals • SS ISO 14064-2 Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emissions reduction and removal enhancements • SS ISO 14064-3 Specification with guidance for the verification and validation of greenhouse gas statements • ISO 14067 Carbon footprint of products • ISO 14068-1 Carbon neutrality • GHG Protocol • Life Cycle Assessment based on SS ISO 14040 and SS ISO 14044
Energy Management	<ul style="list-style-type: none"> • SS ISO 50001 Energy management systems • SS ISO 50006 Evaluating energy performance using energy performance indicators and energy baselines
Waste Generation	<ul style="list-style-type: none"> • Technical Reference (TR) 109 Sustainable packaging guiding framework and practices • BRC Global Standard for Packaging
Occupational Health & Safety	<ul style="list-style-type: none"> • SS ISO 45001 Occupational health and safety • SS ISO 45003 Psychological health and safety at work

Data Security	<ul style="list-style-type: none"> • SS ISO/IEC 27001 Information security management systems • ISO/IEC 27701 Privacy information management • ISO 28000 Security management systems • TR 91 Cybersecurity labelling for consumer IOT • TR 106 Tiered cybersecurity standards for enterprises • TR 111 Securing cyber-physical systems for buildings • IMDA Data Protection Trustmark Certification • CSA Cybersecurity Certification – Cyber Trust Mark • ISO/IEC 15408 Information security, cybersecurity and privacy protection • ISA/IEC 62443 Series of Standards
Others	<ul style="list-style-type: none"> • TR 105 Guidelines for last mile delivery of parcels • Revised TR 39 Freight container equipment interchange receipt²² • New TR Common data standard for container logistics flow²³ • Forest Stewardship Council Chain of Custody (FSC CoC) Certification • Programme for the Endorsement of Forest Certification (PEFC)

²²The TR 39 will be elevated to a Singapore Standard (SS) and will be published in Q2 2024.

²³The TR on common data standard for container logistics flow will be published in Q2 2024.

SUSTAINABILITY REPORTING FRAMEWORKS

	Global Reporting Initiative (GRI) Standards	CDP Questionnaire and Reporting Guidance	Sustainability Accounting Standards (SASB)	International Sustainability Standards Board (ISSB) Standards	Task Force on Climate-related Financial Disclosures (TCFD)
Target Reporters	All Companies	Companies, cities, states, and regions	Listed companies in American exchanges, other companies	All companies	All companies
Target Audience	All stakeholders	Investors, buyers, other stakeholders	Investors	Investors	Investors, lenders, insurers
Focus Areas	E, S, G	E, G	E, S, G	Currently only E, but E, S, G are in development	E, G
Purpose	Help organisations report on their impact on stakeholders and the environment.	Capture environmental data related to GHG emissions, water, waste, supply chain.	Facilitate disclosure of material sustainability information in US SEC filings and has sector-specific disclosures.	Harmonise global baseline of sustainability disclosures, guides companies in integrating sustainability and financial disclosures.	Encourage companies to align climate-related risk disclosures with investor needs. TCFD will be subsumed under ISSB, IFRS - S2.

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